BOGDANOV, O.S., doktor tekhnicheskikh nauk, professor, redaktor; BRAND, V.Yu., kandidat tekhnicheskikh nauk, redaktor; DERKACH, V.G., kandidat tekhnicheskikh nauk, redaktor; DOLIVO-DOBROVOL'SKIY, V.V., doktor tekhnicheskikh nauk, redaktor; ZAKHVATKIN, V.K., redaktor; KACHAN, I.N., kandidat tekhnicheskikh nauk, redaktor; OLEVSKIY, V.A., kandidat tekhnicheskikh nauk, redaktor; LOKONOV, M.F., kandidat tekhnicheskikh nauk, redaktor; PARFENOV, A.M., kandidat tekhnicheskikh nauk, redaktor; PODNEK, A.K., redaktor; POLIVANOV, K.Yu., redaktor; FINKEL'SHTEYN, G.I., kandidat tekhnicheskikh nauk, redaktor; FOMIN, Ya.I., kandidat tekhnicheskikh nauk, redaktor; SHINYAKOV, M.I., redaktor; YUDENICH, G.I., doktor tekhnicheskikh nauk, redaktor; BYKOV, G.P., redaktor; YEZDOKOVA, M.L., redaktor izdatel'stva; EVENSON, I.M., tekhnicheskiy redaktor

[Proceedings of the Third Scientific Session of the Institute of Mechanical Processing of Economic Minerals] Trudy III nauchno-tekhnicheskoi sessii instituta Mekhanobr. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1955. 758 p. (MLRA 10:8)

1. Leningrad. Nauchno-issledovatel'skiy i proyektnyy institut mekhanicheskoy obrabotki poleznykh iskopayemykh
(Ore dressing) (Flotation)

SOV/137-58-7-14016

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 7, p 4 (USSR)

AUTHORS: Kazennov, M. N., Ozolin, L. T., Fomin, Ya. I.

TITLE: Beneficiation of the Hematite-magnetite Ores of the Olenegorsk Deposit (Obogashcheniye gematito-magnetitovykh rud Olenegorskogo mestorozhdeniya)

PERIODICAL: [Tr.] Vses. n.-i. i proyektn. in-ta mekhan. obrabotki poleznykh iskopayemykh, 1957, Nr 102, pp 11-42

ABSTRACT: The dressability of the ore was tested by a variety of procedures: wet and dry magnetic separation on separators having a weak magnetic field to separate the magnetite concentrate, dry separation on strong-field separators and gravitational processes to separate the hematite concentrate, and the magnetic roasting process to separate magnetite and hematite concentrates. The procedure developed, including magnetic separation and gravitation, permits the production of a concentrate containing 60% Fe, with recovery of 90% of the Fe. A flotation method has been successfully developed at the Mekhanobr institute to dress finely-disseminated hematite ores. The launching of the first production line of the mill showed that

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Beneficiation of the Hematite-magnetite Ores of the Olenegorsk Deposit

uninterrupted operation and attainment of the planned qualitative and quantitative indices requires a change in the process procedure. The changes are the following: employment of 2-stage comminution, introduction of secondary separation by magnetic means, secondary crushing of the middlings with the initial ore, elimination of the two-cell pulsator jigs provided to precipitate the middlings after fine grinding, and replacement of the filters provided in the design by spiral classifiers. Tests were made of "plan-filters" [interpreted to mean an Oliver-type plane-surface rotating vacuum filter. Transl. Ed. Note] which dewatered the concentrate to 9% moisture content. It is recommended that secondary separation of the concentrate and flotation be introduced.

1. Iron ores--Processing 2. Iron ores--Flotation A. Sh.

Card 2/2

SOV/127-58-11-8/16

AUTHORS: Fomin, Ya.I., Lakota, B.M., Crazhdantsev, I.I. and Kurova, M.D., Mining Engineers

TITLE: The Experiment of Concentrating Manganese Ores in Heavy Suspensions and by Flotation Under Industrial Conditions (Opyt obogashcheniya margantsevykh rud v tyazhelykh suspenziyakh i flotatsiyey v promyshlennykh usloviyakh)

PERIODICAL: Cornyy zhurnal, 1958, Nr 11, pp 32 - 44 (USSR)

ABSTRACT: The authors give a detailed report on experiments made in a concentration mill of the Mine Administration imeni Voroshilov of the Nikopol'-Marganets Trust, where manganese ores and manganese slime were concentrated on a special experimental assembly. The manganese ore was concentrated in heavy suspension and the ground ferrosilicon was used as weighing compound (fig. 2). This compound was in later experiments replaced by cinder, but the results of concentration were almost identical in both cases (tables 1-11). In the experiment with the flotation of manganese slime, a mixture of sodium carbonate (2.5-3 kg/ton), sulfate soap (1.3-1.5 kg/ton) and oxidized white spirit (0.5 kg/ton was

Card 1/2

The Experiment of Concentrating Manganese Ores in Heavy Suspensions and by Flotation Under Industrial Conditions

used as a flotation reagent. The scheme of concentration process is given in fig. 4, and the results of flotation - in tables 11-16. The results of both experiments showed the necessity of further improvement and simplification of concentration and flotation processes, though the results already obtained are satisfactory. In connection with these experiments the following scientists are cited by the authors: Z.S. Bogdanova, O.P. Bondarenko; and D.I. Frantsuzov. There are 16 tables, 5 schemes and 2 Soviet references.

Card 2/2 1. Manganese ores--Processing

FOMIN, Ya. I.

Operating conditions of jigs. Trudy Mekhanobr no.125:63-100 '60.
(MIRA 14:5)
(Ore dressing—Equipment and supplies)

FOMIN, Ya.I.; KUROVA, M.D.

Adoption by industry of heavy suspension ore dressing practices.
Obog.rud. 4 no.3:6-12 '59. (MIRA 14:8)
(Ore dressing)

BOGDANOV, O.S., doktor tekhn. nauk, prof., otv. red.; BRAND, V.Yu., kand. tekhn. nauk, red.; DERKACH, V.G., doktor tekhn. nauk, red.; ZAKHVATKIN, V.K., red.; OLEVSKIY, V.A., kand. tekhn. nauk, red.; LOKONOV, M.F., kand. tekhn. nauk, red.; PODNEK, A.K., kand. tekhn. nauk, red.; TUSEYEV, A.A., red.; FINKEL'SHTEYN, G.A., kand. tekhn. nauk, red.; FOMIN, Ya.I., kand. tekhn. nauk, red.; CHERNOBROV, S.M., kand. tekhn. nauk, red.; KUTUZOVA, L.M., red.

[Transactions of the Fourth Scientific Technological Session of the Scientific Research Institute for Mechanical Concentration of Minerals] Trudy IV nauchno-tekhnicheskoi sessii instituta MEKHANOBR. Leningrad, 1961. 665 p. (MIRA 17:5)

1. Leningrad. Nauchno-issledovatel'skiy i proyektnyy institut mekhanicheskoy obrabotki poleznykh iskopayemykh.

FOMIN, V. I.

All-Union Conference on Ore Dressing and the Utilization of Low-Grade Manganese Ores. Obog. rud 6 no.3:51-52 . (MIRA 14:1)
(Ore dressing--Congresses)

BOGDANOV, O.S. prof.; FOMIN, Ya.I.

Present status and further expansion of the dressing of Chiatura and Nikopol' manganese ores. Obog. rud 6 no.4:3-8 '61.
(MIRA 15:1)

(Nikopol' region (Dnepropetrovsk Province)--Manganese ores)
(Chiatura region--Manganese ores) (Ore dressing)

FOMIN, Ya.I.

Phosphorus content of Nikopol' deposit manganese ores. Obog. rud 7 no.3: 18-24 '62. (MIRA 16:4)
(Nikopol' region--Manganese ores--Analysis)
(Phosphorus--Analysis)

FOMIN, Ya.I.

Phosphorus distribution between ore and rock minerals in manganese ores. Obog. rud 7 no.4:14-18 '62. (MIRA 16:4)
(Manganese ores—Analysis) (Phosphorus—Analysis)

FOMIN, Ya.I., kand. tekhn. nauk

Technology of dressing Kerch tobacco-colored ores. Gor. zhur. no.10:76-77 O '63. (MIRA 16:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy i proyektnyy institut mekhanicheskoy obrabotki poleznykh iskopayemykh, Leningrad.

FOMIN, Ye.D., inzh.

Cleaning of oil antiseptics. Put' i put. khoz. no. 8:46 Ag '58.
(MIRA 11:8)

(Antiseptics)
(Cleaning machinery and appliances)

FOMIN, Ye.D.

Lumber preservation and drying in Finland. Put' i put. khoz. no.9:47-48 S '58. (MIRA 11:9)
(Finland--Lumber--Drying)

SHIKALOV, I.G., inzh.; FOMIN, Ye.D., inzh.

Two hundred and twenty-five million ties. Puti i put. khoz. no.4:15-16 Ap '59. (MIRA 13:3)
(Railroads--Ties)

FOMIN, Ye.D., inzh.

Equipment for coupling small railroad cars. Put' i put. khoz. no.6:28-29 Je '59. (MIRA 12:10)
(Car couplings)

FOMIN, Ye.D., inzh.

Automation in tie-impregnating plants. Put'i put.khoz. no.7: 4-5 Jl '59. (MIRA 12:10)
(Railroads--Ties)

FOMIN, Ye.D., inzh.

Water walls for steam boilers. Put' i put.khoz. no.10:46 O '59. (MIRA 13:2)
(Railroads--Ties) (Boilers)

FOMIN, Ye.D., inzh.

Crews exchange their experiences. Put' i put. khoz. 4 no. 12:34 D '60. (MIRA 13:12)

(Railroads--Ties)

FOMIN, Ye.D., inzh.; TSUPAK, Ye.F., inzh.

Blocking system. Put' i put.khoz. 10 no.1:31 '66.
(MIRA 19:1)

FOMIN, Ye.M.

In the greenhouses of the Riga enterprises. Biul. Glav. bot. sada no.45:107-109 '62. (MIRA 16:2)

1. Glavnyy botanicheskiy sad AN SSSR.
(Latvia—Greenhouse management)
(Latvia—Plants, Ornamental)

FOMIN, Ye.M.; FATEYEVA, A.A.

Use of additional ight for producing seeds of Primula obconica Hance. Biul.Glav.bot.sada no. 48:91-92 '63. (MIRA 17:5)

1. Glavnyy botanicheskiy sad AN SSSR.

[redacted], Ya. I.

Effect of additional lighting on some ornamental greenhouse plants. Biul. Glav. bot. sada no.57:47-52 '65. (MIRA 18:9)

1. Glavnyy botanicheskiy sad AN SSSR.

VASNEV, N.F.; FOMIN, Ye.S.

New method for fastening inserts to copes in casting ingot molds. Sbor.rats.predl.vnedr.v proizv. no.1:49 '61. (MIRA 14:7)

1. Magnitogorskiy metallurgicheskiy kombinat.
(Founding)

FOMIN, Ye.V.

Automatic machinery for measuring out and stoppering liquid pharmaceuticals. Med.prom. 12 no.1:51-54 Ja '58. (MIRA 11:2)

1. TSentral'noye proyektno-konstruktorskoye byuro Ministerstva zdravookhraneniya SSSR.
(BOTTLING MACHINERY)
(DRUG INDUSTRY--EQUIPMENT AND SUPPLIES)

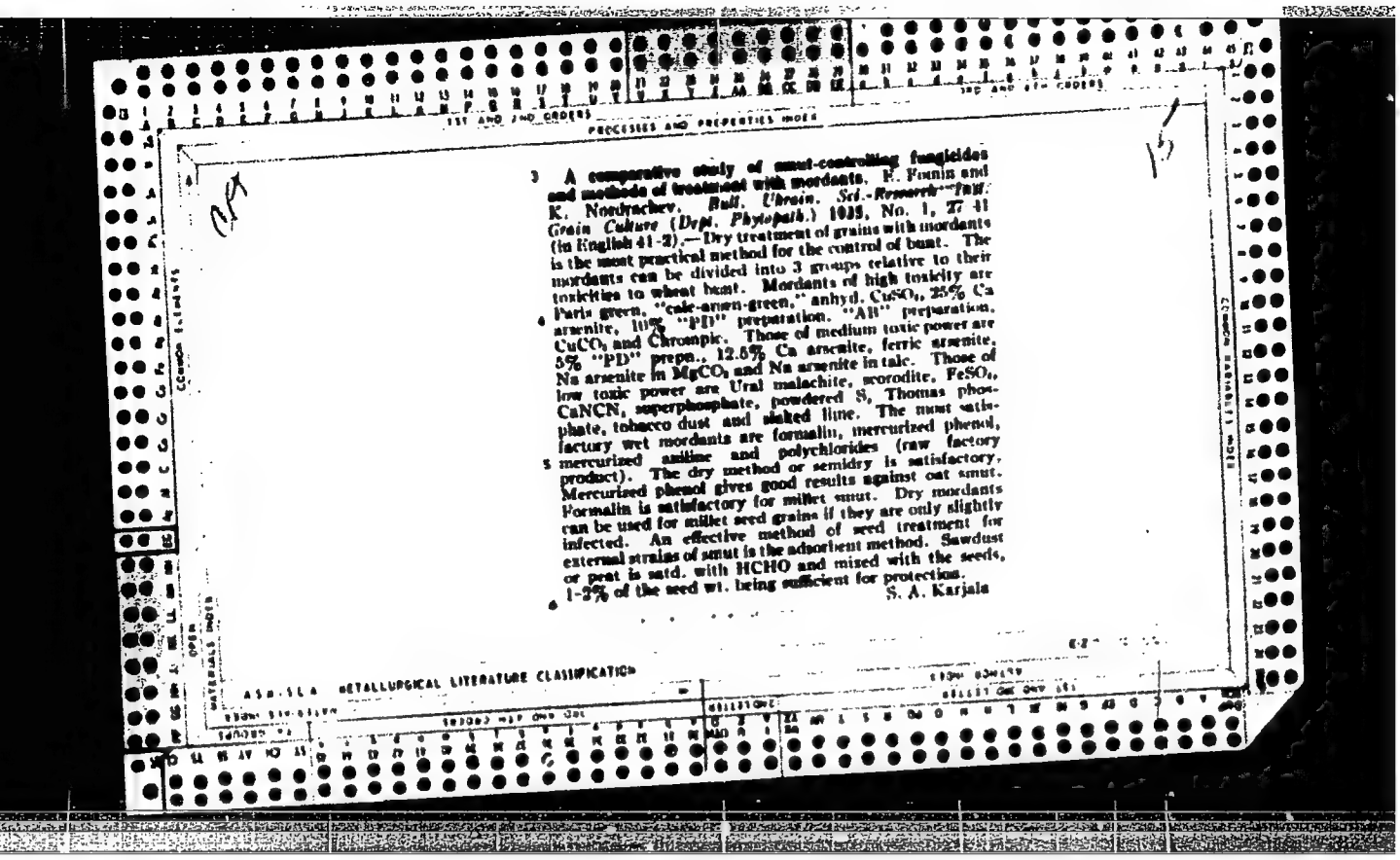
SHAPIRO, G.A., inzh.; FOMIN, Ye.V., inzh.

Start of hot PT-50-130/13 turbines. Elek. sta. 35 no.11:67-68 N '64. (MIRA 18:1)

[illegible], E. L.

"The Problem of Measures for Control of Smut of Grain Crops," Biulleten' VII Vsesoiuznogo S'ezda po Zashchite Rastenii v Leningrade 15-23 Noiabria 1932 Goda, no. 8, 1932, pp. 22-25. 423.92 V96

SO: SIRA, SI 90-53, 15 December 1953



A comparative study of smut-controlling fungicides and methods of treatment with mordants. K. Fomin and K. Nordrachev. *Bull. Ukrain. Sci.-Research Inst. Grain Culture* (*Dept. Phytopath.*) 1935, No. 1, 27-41 (in English 41-2).—Dry treatment of grains with mordants is the most practical method for the control of bunt. The mordants can be divided into 3 groups relative to their toxicities to wheat bunt. Mordants of high toxicity are Paris green, "cale-arsen-green," anhyd. $CuSO_4$, 25% Ca arsenite, 10% "PD" preparation. "All" preparation, $CuCO_3$ and Chrompic. Those of medium toxic power are 5% "PD" prepn., 12.5% Ca arsenite, ferric arsenite, Na arsenite in $MgCO_3$ and Na arsenite in talc. Those of low toxic power are Ural malachite, acrodite, $FeSO_4$, $CaNCN$, superphosphate, powdered S, Thomas phosphate, tobacco dust and slaked lime. The most satisfactory wet mordants are formalin, mercurized phenol, mercurized aniline and polychlorides (raw factory product). The dry method or semidry is satisfactory. Mercurized phenol gives good results against oat smut. Formalin is satisfactory for millet smut. Dry mordants can be used for millet seed grains if they are only slightly infected. An effective method of seed treatment for external strains of smut is the adsorbent method. Sawdust or peat is satd. with HCHO and mixed with the seeds, 1-2% of the seed wt. being sufficient for protection.

S. A. Karjala

FOMIN E. E.

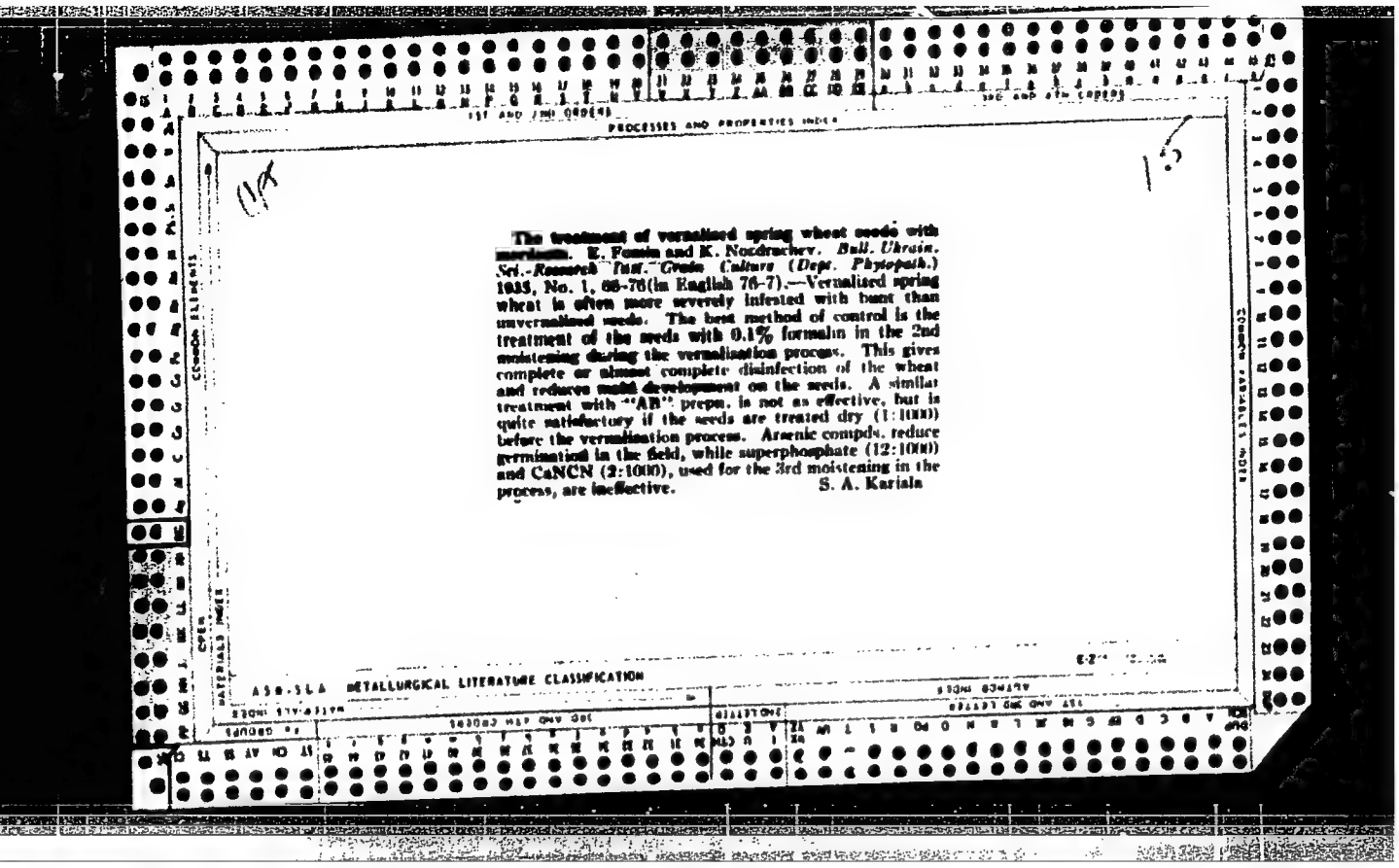
FOMIN E. E., and CHEVELLI, M. "Methods of Germination Tests of Seed to be Treated with Formalin," Trudi Institutu, Ukrains' kii Naukovo Doslidnii Institut Zernovogo Gospodarstva, Labortoriia Fitopatologii, no. 1, 1935, pp. 42-45. 59.9 Uk7
(In Ukrainian)

SO: SIRA, SI 90-53, 15 December 1953

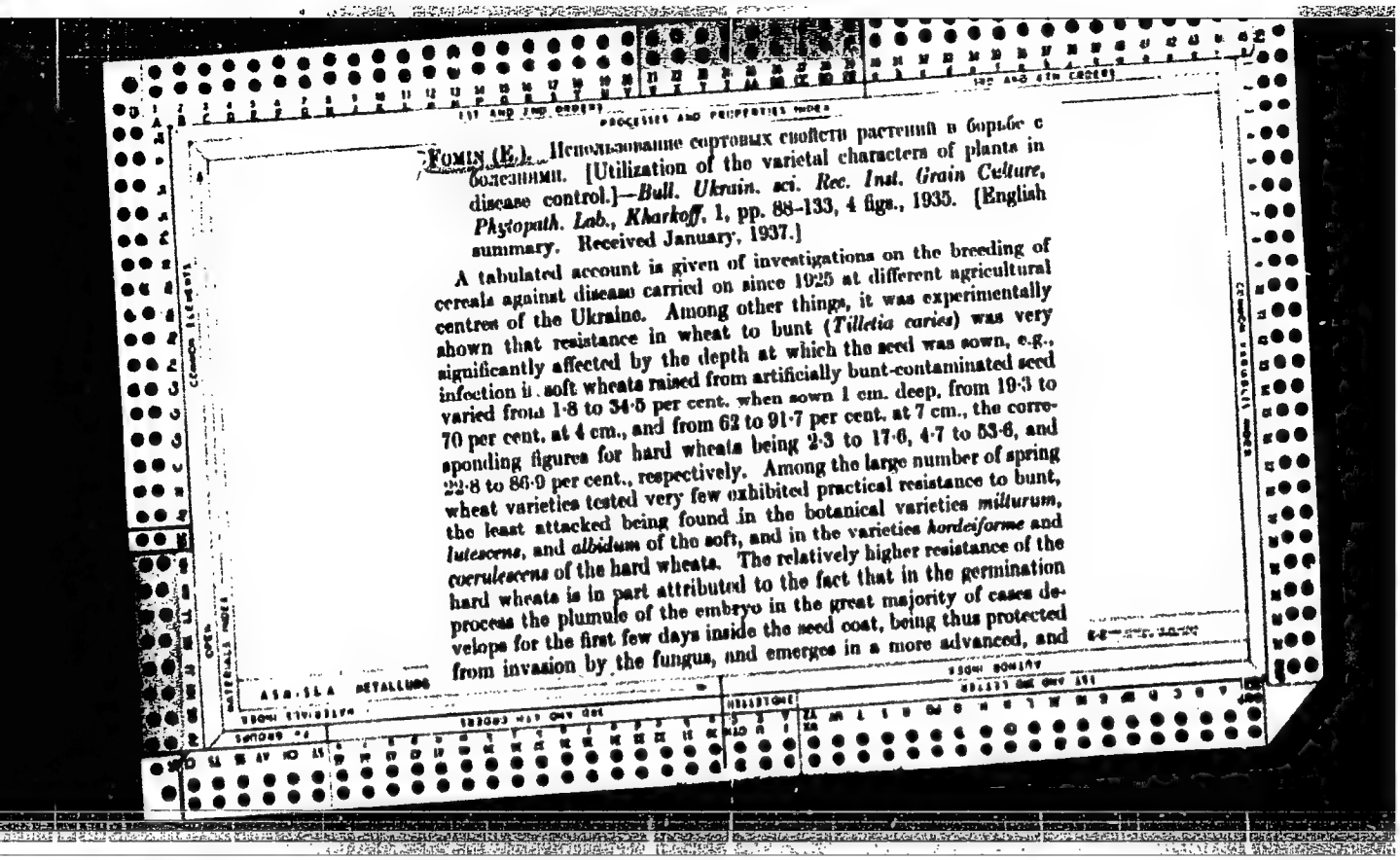
FOMIN, E. E.

FOMIN, E. E., and MOZGRACHOV, K. G. "Dependence of Wheat Infestation with Bunt on Different Factors, and Differentiation of Fungicides," Trudi Institutu, Ukrains'kii Naukovo Doslidnii Institut Zernovogo Gospodarstva, Laboratoriia Fitopatologii, no. 1, 1935, pp. 54-64. 59.9 Uk7 (In Ukrainian)

SO: SIRA, SI 90-53, 15 December 1953



The treatment of vernalized spring wheat seeds with mercurials. E. Fomin and K. Nozdrachev. *Bull. Ukrain. Sci.-Research Inst. Grain Culture (Dept. Phytopath.)* 1935, No. 1, 68-76(in English 76-7).—Vernalized spring wheat is often more severely infested with bunt than unvernalized seeds. The best method of control is the treatment of the seeds with 0.1% formalin in the 2nd moistening during the vernalization process. This gives complete or almost complete disinfection of the wheat and reduces mold development on the seeds. A similar treatment with "AB" preps. is not as effective, but is quite satisfactory if the seeds are treated dry (1:1000) before the vernalization process. Arsenic compds. reduce germination in the field, while superphosphate (12:1000) and CaNCN (2:1000), used for the 3rd moistening in the process, are ineffective. S. A. Kariala



FOMIN (E.). Использование сортовых свойств растений в борьбе с болезнями. [Utilization of the varietal characters of plants in disease control.]—*Bull. Ukrain. sci. Rec. Inst. Grain Culture, Phytopath. Lab., Kharkoff*, 1, pp. 88–133, 4 figs., 1935. [English summary. Received January, 1937.]

A tabulated account is given of investigations on the breeding of cereals against disease carried on since 1925 at different agricultural centres of the Ukraine. Among other things, it was experimentally shown that resistance in wheat to bunt (*Tilletia caries*) was very significantly affected by the depth at which the seed was sown, e.g., infection in soft wheats raised from artificially bunt-contaminated seed varied from 1·8 to 34·5 per cent. when sown 1 cm. deep, from 19·3 to 70 per cent. at 4 cm., and from 62 to 91·7 per cent. at 7 cm., the corresponding figures for hard wheats being 2·3 to 17·6, 4·7 to 53·6, and 22·8 to 86·9 per cent., respectively. Among the large number of spring wheat varieties tested very few exhibited practical resistance to bunt, the least attacked being found in the botanical varieties *milturum*, *lutescens*, and *albidum* of the soft, and in the varieties *hordeiforme* and *coerulescens* of the hard wheats. The relatively higher resistance of the hard wheats is in part attributed to the fact that in the germination process the plumule of the embryo in the great majority of cases develops for the first few days inside the seed coat, being thus protected from invasion by the fungus, and emerges in a more advanced, and

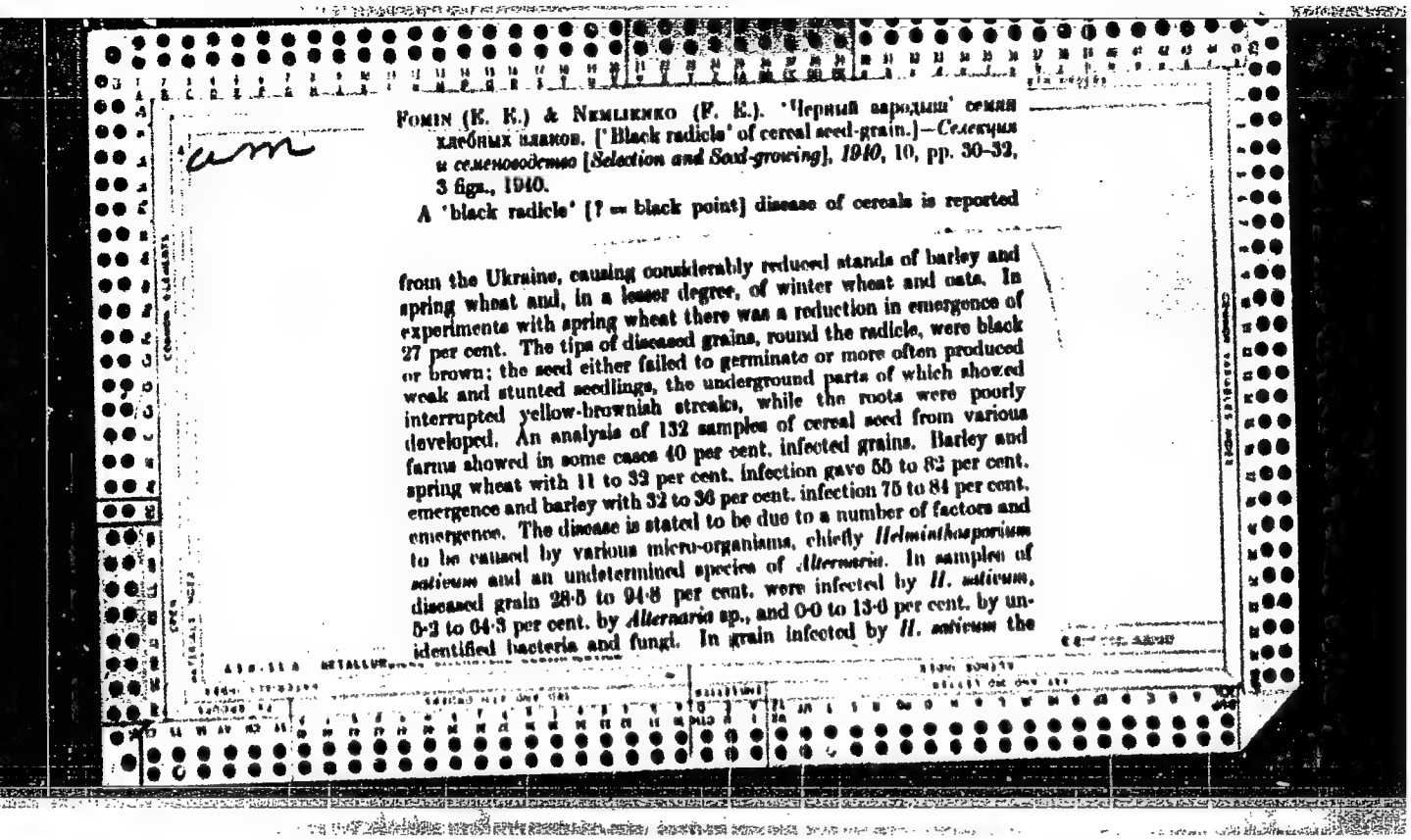
[illegible], E. E.

FOMIN, E. E., and MOZDRACHOV, K. G. "Cultural Practices in Plant Disease Control," Trudi Institutu, Ukrains'kii Naukovo Doslidnii Institut Zernovo-o Gospodarstva, Laboratoriia Fitopatologii, no. 1, 1935, pp. 130-150. 59.9 Uk7 (In Ukrainian)

SO: SIRA, SI 90-53, 15 December 1953

R.I.N, E. L., and NAZDRACHOV, K. G. "Causes of Low Effectiveness of the Soil Control Program on Collective and State Farms and Ways of Eliminating Them," Trudi Institutu, Ukrains'kii Naukovo Doslidnii Institut Zernovogo Gospodarstva, Laboratoriia Fitopatologii, no. 1, 1935, pp. 151-156. 59.9 Uk7 (In Ukrainian)

SO: SIRA, SI 90-53, 15 December 1953



FOMIN (K. E.) & NEMLIENKO (F. E.). 'Черный зародыш' семян хлебных злаков. ['Black radicle' of cereal seed-grain.]—*Селекция и семеноводство [Selection and Seed-growing]*, *1940*, 10, pp. 30–32, 3 figs., 1940.

A 'black radicle' [? = black point] disease of cereals is reported from the Ukraine, causing considerably reduced stands of barley and spring wheat and, in a lesser degree, of winter wheat and oats. In experiments with spring wheat there was a reduction in emergence of 27 per cent. The tips of diseased grains, round the radicle, were black or brown; the seed either failed to germinate or more often produced weak and stunted seedlings, the underground parts of which showed interrupted yellow-brownish streaks, while the roots were poorly developed. An analysis of 132 samples of cereal seed from various farms showed in some cases 40 per cent. infected grains. Barley and spring wheat with 11 to 33 per cent. infection gave 55 to 82 per cent. emergence and barley with 32 to 36 per cent. infection 75 to 84 per cent. emergence. The disease is stated to be due to a number of factors and to be caused by various micro-organisms, chiefly *Helminthosporium sativum* and an undetermined species of *Alternaria*. In samples of diseased grain 28·5 to 94·8 per cent. were infected by *H. sativum*, 5·2 to 64·3 per cent. by *Alternaria* sp., and 0·0 to 13·6 per cent. by unidentified bacteria and fungi. In grain infected by *H. sativum* the

blackening often expanded from the radicle to other parts of the seed, which usually became somewhat shrivelled; the mycelium of the fungus permeated the tissues of the pericarp, endosperm, and the radicle, and penetrated, after emergence of the seedling, into the stem and root, but not beyond a distance of 10 cm. from the seed. In grain infected by *Alternaria* sp., the blackening was usually restricted to the area around the radicle, the seed remained unshrivelled, and the mycelium of the fungus was found only in the pericarp and very rarely in the endosperm. The external symptoms produced by the two pathogens, however, varied considerably and rendered differentiation difficult except by culturing. In trials with spring and winter wheats some varieties showed only negligible infection and are considered promising for breeding work. In control experiments soaking the seed in a 0·1 per cent. solution of mercuric chloride for 5 minutes reduced infection to 3·1 per cent. and thermal disinfection (soaking for 4 hours at 30° C. and then heating for 8 minutes at 52°) to 30 per cent. Mercuric compounds are, however, considered too highly toxic for practical use and thermal disinfection is recommended. Further measures of control should include regular weeding of wild grass hosts, immediate drying of moist seeds after harvest, prompt removal of harvested cereals from the field, deep ploughing, and agrotechnical methods to ensure a vigorous development of the plants.

FO'IN, Ye. Ye. and [illegible], A. G.

"Diseases and Pests of Vegetable, Melon, and Potato Crops in the Ukraine in 1947 and 1948," Scientific Works of the Ukrainian Scientific Research Institute of Vegetable Growing, Vol. 2, pp 291-301, 1950.

USSR / Plant Diseases--Cultivated Plants 0

Abs Jour: Ref Zhur-Biologiya, No 16, 1958, 73311

Author : Fomin, Ye. Ye.; Ryss, R.G.

Inst : AS USSR

Title : Vectors and Diseases of Vegetables, Melon Crops, and Potatoes, and Methods of Their Control

Orig Pub: V. sb.: Vopr. razvitiya s.kh. Poles'ya, Kiyev, AN USSR, 1956 (1957), 153-158

Abstract: The following diseases are especially harmful to potatoes in Poles'ye: viruses, degenerations (on sandy soils), canker, potato blight, ring rot, black stem rot, common, black and powdery scab. The most serious pests for potato are stem nematodes, then wireworms. Of vegetable crops, cabbage

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Abs Jour: Ref Zhur-Biologiya, No 16, 1958, 73311

suffers the most especially from anbury clubroot, bacteriosis and black spot. The most harmful pests for cabbage are the cabbage moth, diamond-back moth, cabbage aphis, cabbage maggot and Bairs carbonaria. Cucumbers and pumpkins are infected with powdery mildew; watermelons with Colletotrichum (Gloeosporium) lagenarium; cucumbers in open soil with spider mite; table beets with leaf scorch, mosaic, Pegomyia hyoscyami Panz.; tomatoes with crown and black rot, black bacterial spot, megas-poriosis and septoriosis. Control measures are presented for the pests and diseases indicated, es-pecially detailed for potato diseases and stem nematodes. -- A. P. Adrianov

RYSS, Rebekka Grigor'yevna, kand. sel'khoz.nauk; FOMIN, Ye.Ye., otv. red.; KIREYEV, F.N., red.; KVITKA, S.P., tekhn. red.

[Potato stem nematode and measures for its control] Stebleva ia nematoda kartofelia i mery bor'by s nei. Kiev, Izd-vo UASKhN, 1962. 118 p. (MIRA 16:5)
(Potatoes--Diseases and pests)
(Nematode diseases of plants)

FOMIN, Yu. , VERNOV, S. N., KHRISTIANSEN, G. B., ATRASHKEVICH, V. I., DMITRIYEV, V. A., KHRENOV, B. A., KULIKOV, G. V., NECHIN, Yu. A. and SOLOV'YEVA, V. I.

"Primary Cosmic-Ray Component in Superhigh-Energy Region"

Report presented at the International Conference on Cosmic Rays and Earth Storm, 4-15 September 1961, Kyoto, Japan.

P. N. Lebdev Institute of Physics, University of Moscow, 3-a, Miusssakaya, 3, Moscow, USSR

FOMIN, Yu.A., inzhener.

The problem of a radical improvement in Moscow's city and inter-urban transportation system. Gor. khoz. Mosk. 29 no.5:20-24 My '55. (Moscow--Subways)

PODOL'SKIY, L.R.; FOMIN, Yu.A.

Lift repair of electric locomotives in 2.7 days. Elek. i tepl. tiaga 2 no.10:20-23 O '58. (MIRA 11:11)

1. Nachal'nik otdela remonta elektropodvizhnogo sostava sluzhby lokomotivnogo khozyaystva depo Nikopol', Stalinskoy dorogi (for Podol'skiy).
2. Nachal'nik elektrodepo Nikopol' Stalinskoy dorogi (for Fomin).
(Electric locomotives--Maintenance and repair)

PODOL'SKIY, Leonid Romanovich; FOMIN, Yuriy Aleksandrovich; OZEMBLOVSKIY, Ch.S., inzh., red.; BOBROVA, Ye.N., tekhn.red.

[Overhauling electric locomotives in 2.6 days by lifting the body from the wheels; experience of the work of the Electric Locomotive Collective of the Nikopol Depot on the Stalin Railway] Pod"emochnyi remont elektrovoza za 2,6 sutok; opyt raboty kollektiva elektrovoznogo depo Nikopol' Stalinskoi dorogi. Moskva, Gos. transp.zhel-dor.izd-vo, 1959. 42 p. (MIRA 13:1)
(Nikopol'--Electric locomotives--Maintenance and repair)

FOMIN, Yu. A.

Computing the process of the fuel spray in diesel engines at determined intensity of the remaining pressure. p. 27.

TEKHNIKA, Sofiia, Bulgaria, Vol. 8, no. 3, 1959

Monthly List of East European Accessions (EEAI) LC, Vol. 8, No. 10, Oct. 1959, Uncl.

FOMIN, Yu.A., inzh.

Numerical code of the explanations for relay circuits. Mekh. i avtom.proizv. 15 no.3:50-51 Mr '61. (MIRA 14:3)
(Electric relays)

PODOL'SKIY, Leonid Romanovich; CHOLOVSKIY, Nikolay Ivanovich; FOMIN, Yuriy Aleksandrovich; BYCHKOVSKIY, A.V., kand. tekhn. nauk, red.; KHITROVA, N.A., tekhn. red.

[Electric meters for registering the consumption of electric power by electrified rolling stock] Schetchiki elektricheskoi energii elektropodvizhnogo sostava. Moskva, Transzheldorizdat, 1962. 115 p. (MIRA 15:10)
(Electric railroads—Current supply) (Electric meters)

[illegible]; KHRISTIANSEN, G. B.; ABROSIMOV, A. M.; KHRENOV, DMITRIYEV, V. A. [illegible], V. I.; SOLOVYEV, K.I.; BELYAYEVA, M.F.; NECHIN, Yu. A.; VEDENEYEV, O.N.; [illegible], G. V.; FOMIN, Yu. A.

Summary of the new data on EAS structure obtained with the aid of the complex equipment of Moscow State University.

Report submitted foe the 8th Intl. Conf. on Cosmic Rays (IUPAP) Jaipur, India, 2-11 Dec 1963

TIANSEN, G. B.; ABROSIMOV, A. M.; KHRENOV, B. A.; ATRASHKEVICH, V. B.;
LIKOV, G. V.; SOLOVIYEVA, V.I.; FOMIN, Yu. A.

The cosmic ray primary radiation of ultra high energy.

Report submitted for the 8th Intl. Conf. on Cosmic Rays (IUPAP), Jaipur, India, 2-14 Dec 1963

S/056/63/044/002/041/065
B108/B186

AUTHORS: Fomin, Yu. A., Khristiansen, G. B.

TITLE: Size distribution of extensive atmospheric showers

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 44, no. 2, 1963, 666-675

TEXT: The rapid change in the power exponent of the spectrum with respect to the number of particles of extensive showers, observed recently for $N \sim 10^5 - 10^6$ at sea level (G.B. Kulikov, G.B. Khristiansen. Nuovo Cim., Suppl., 8, 1958; S. Fukui et al. Progr. Theor. Phys., Suppl., 16, 1, 1960; M.R. Allan et al. Preprint, 1962) is explained here. For this purpose it is sufficient to assume that the distribution of magnetic clouds in the Galaxy with respect to the parameter lH is such that the diffusion coefficient for ultrahigh energy cosmic rays changes from D = const to $D \sim E^{\alpha}$. E is the energy, l the size of the magnetic cloud, H the magnetic field strength in it. $\alpha > 0.5$ when the energy changes by one order of magnitude. The most probable explanation is the one which attributes the rapid change in the power exponent of the shower spectrum to corresponding

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changes in the exponent of the primary energy spectrum. An analysis of experimental data shows that the primary radiation does not consist of heavy nuclei only. There are 4 figures and 5 tables.

ASSOCIATION: Institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta (Institute of Nuclear Physics of Moscow State University)

SUBMITTED: August 13, 1962

SYROVATSKIY, S.I.; FOMIN, Yu.A.; KHRISTIANSEN, G.B.

Energy spectrum of primary cosmic radiation and its composition in the region of ultrahigh energies. Zhur. eksp. i teor. fiz. 45 no.5:1595-1602 N '63. (MIRA 17:1)

1. Fizicheskiy institut imeni Lebedeva AN SSSR i Institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta.

[illegible], Ye.P.; [illegible], A.T.; [illegible], A.S.; [illegible], G.T.; [illegible], Ye.I.; [illegible], Yu.A.; [illegible], L.A.

Primary cosmic radiation of superhigh energy. Izv. AN SSSR Ser. Fiz. 28 no.12:1934-1941 D '64 (MIRA 18:2)

VERNOV, S.N.; KHRISTIANSEN, G.B.; ABROSIMOV, A.T.; ATRASHKEVICH, V.B.; BELYAYEVA, I.F.; VEDENEYEV, O.V.; DMITRIYEV, V.A.; KULIKOV, G.V.; NECHIN, Yu.A.; SOLOV'YEVA, V.I.; SOLOV'YEV, K.I.; FOMIN, Yu.A.; KHREMOV, B.A.

Description of a modernized complex setup for studying extensive air showers. Izv. AN SSSR Ser. fiz. 28 no.12:2087-2092 D '64 (MIRA 18:2)

ACCESSION NR: AP4042579 S/0056/64/046/006/2141/2150

AUTHORS: Fomin, Yu. A.; Khristiansen, G. B.

TITLE: Energy spectrum and composition of cosmic rays of galactic and metagalactic origin

SOURCE: Zh. eksper. i teor. fiz., v. 46, no. 6, 1964, 2141-2150

TOPIC TAGS: cosmic ray, cosmic ray composition, cosmic radiation energy, cosmic ray origin, galactic cosmic ray, metagalactics

ABSTRACT: To ascertain the contribution of primary cosmic radiation from galactic and metagalactic sources, the authors calculate the energy spectrum and composition of cosmic rays of both galactic and metagalactic origin, starting from the diffusion model of cosmic-ray propagation, and using more general assumptions concerning the energy variation of the diffusion coefficient than made heretofore. In addition, a more detailed comparison is made of the results of the cal-

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ACCESSION NR: AP4042579

culation with the experimental particle-number spectrum of extensive air showers and with the muon number distribution in a shower having a specified number of particles. The comparison results imply that the metagalactic cosmic rays play a major role in the energy region $E > 10^{17}$ eV. The agreement between the theoretical and experimental distributions is good, and the smaller slope of the energy spectrum of the metagalactic cosmic rays does not contradict the existing experimental data in the region $E < 10^{17}$--10^{18} eV. "In conclusion, the authors express sincere gratitude to S. I. Sy*rovatskiy for a discussion of the problem and to L. G. Dedenko for communicating the results of his calculations." Orig. art. has: 7 figures, 3 formulas, and 4 tables.

ASSOCIATION: Institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta (Nuclear Physics Institute, Moscow State University)

SUBMITTED: 19Dec63 DATE ACQ: ENCL: 00

SUB CODE: AA, NP NR REF SOV: 008 OTHER: 004

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2c

L 23402-65 EWT(l)/EWG(v)/FCC/EEC-4/EEC(t)/EWA(h) Po-4/Pe-5/Pq-4/Pae-2/Peb/P1-4
ACCESSION NR: AP5002095 GW/WS S/0048/64/028/012/1934/1941

AUTHOR: Khristiansen, G. B.; Abrosimov, A. T.; Atrashkevich, V. B.; Kulikov, G. V.; Solov'yeva, V. I.; Fomin, Yu. A.; Khrenov, B. A.

TITLE: Primary cosmic radiation of superhigh energy

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 28, no. 12, 1964, 1934-1941

TOPIC TAGS: atmospheric shower, shower spectrum, primary energy spectrum, cosmic ray, atomic number, μ meson, cosmic ray diffusion, magnetic field, magnetic rigidity, proton, nucleus, diffusion coefficient

ABSTRACT: The spectrum investigation of large atmospheric showers may be made by means of the number of particles which is possible to study using a complex large-scale facility. The spectrum of large atmospheric showers near sea level changes its form sharply with the change in the total number N of particles. The transition of cosmic radiation from the shower spectrum to the primary energy spectrum is performed using a model of the development of atmospheric showers. The develop-

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ment depends upon the number of particles and their atomic number A. These parameters were obtained by analyzing the fluctuations of μ-meson flux measured in the complex facility. The distribution of the meson number depends upon the form of the primary energy spectrum, which is characterized by the exponent γ. Acceleration and diffusion of cosmic rays occur when both a change in the energy spectrum and a change in the composition of rays take place simultaneously. The diffusion of cosmic rays takes place in a magnetic field where the diffusion coefficient is specified by magnetic rigidity, which is equal to 2ε/300H for nuclei and ε/300H for protons (ε is the energy of a nucleon). A table in the original article contains the percentage of galactic cosmic radiation of various energies. This table shows that the increase of energy causes an increase of heavy nuclei in cosmic radiation of the Galaxy. A decrease in the percentage of light nuclei α and L with the increase in energy is caused by the higher diffusion coefficient. The number of μ-mesons computed theoretically agreed with experimental data up to 10^{15} ev of the primary particles. At energies greater than 10^{17} ev, the experimental data showed more protons and light nuclei than the theory purports. Orig. art. has: 4 figures, 8 tables, and 12 formulas. [EG]

L 23402-65
ACCESSION NR: AP5002095

ASSOCIATION: none

SUBMITTED: 00	ENCL: 00	SUB CODE: AA
NO REF SOV: 008	OTHER: 001	ATD PRESS: 3174

Card 3/3

FOMIN, Yu.A; KHRISTIANSEN, G.B.

Energy spectrum and composition of cosmic rays of galactic and metagalactic orgin. Zhur.eksp.i teor.fiz. 46 no.6:2141-2150 Je '64. (MIRA 17:10)

1. Institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta.

AKSENOV, Vasiliy Ivanovich; DANILOV, Yuriy Vladimirovich; YEGOROV, Viktor Konstantinovich; FOMIN, Yuriy Alekseyevich; VASIL'YEVA,I., red. izd-va; SMIRNOVA, G.V., tekhn. red.

[The K-125 and K-175 motorcycles and their modifications; construction, operation and the catalog of interchangeable parts] Mototsikly K-125, K-175 i ikh modifikatsii; ustroistvo, ekspluatatsiia i katalog vzaimozameniaemykh detalei. Moskva, Mashgiz, 1962. 198 p. (MIRA 15:7)

(Motorcycles)

FOMIN, Yu A.

5(2) PHASE I BOOK EXPLOITATION SOV/2015

Akademiya nauk SSSR. Kol'skiy filial

Sbornik trudov po khimicheskoy tekhnologii mineral'nogo syr'ya Kol'skogo poluostrova, vyp. 1 (Collection of Works on Chemical Technology of Minerals of the Kola Peninsula, Nr 1) Moscow, Izd-vo AN SSSR, 1959. 221 p. 1,200 copies printed. Errata slip inserted.

Resp. Ed.: B.N. Melent'yev, Candidate of Geological and Mineralogical Sciences; Ed. of Publishing House: B.M. Markus; Tech. Ed.: E. Yu. Bleykh.

PURPOSE: The book is intended for scientists and technicians concerned with the extraction of tantalum, niobium, and rare metals.

COVERAGE: The book deals with a study of a complex treatment of the perovskite and sphene concentrates. The first three articles cover methods of extraction of titanium dioxide from the perovskite concentrate with side recovery of niobium, tantalum, and rare earths. The treatment of sphene concentrate is discussed in two articles. The separation of titanium, niobium, and tantalum is described in a separate article. The problem of selecting an efficient

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technological procedure is discussed in the last article. No personalities are mentioned. There are 31 references: 25 Soviet, 3 English, and 3 German.

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GOROSHCHENKO, Ya.G.; BELOKOSKOV, V.I.; FOMIN, Yu.A.; ANDREYEVA, M.I.

Laboratory experiments on the processing of perovskite concentrate by the titanyl sulfate method. Sbor.trudov po khim.tekhnol. min.syr'ia Kol'.poluos. no.1:5-24 '59. (MIRA 12:5)
(Perovskite) (Titanyl sulfates)

GOROSHCHENKO, Ya.G.; BELOKOSKOV, V.I.; FOMIN, Yu.A.; ANDREYEVA, M.I.

Laboratory experiments on the processing of perovskite concentrate by fusion with ammonium sulfate and sulfuric acid. Sbor.trudov po khim.tekhnol.min.syr'ia Kol'.poluos. no.1:25-39 '59. (MIRA 12:5)
(Perovskite) (Titanium alloys) (Ammonium sulfate)

GOROSHCHENKO, Ya.G.; BELOKOSKOV, V.I.; FOMIN, Yu.A.

Extended laboratory experiments on the fusion of perovskite concentrate with ammonium sulfate and sulfuric acid. Sbor. trudov po khim.tekhnol.min.syr'ia Kol'.poluos. no.1:40-66 '59. (MIRA 12:5)

(Perovskite) (Ammonium sulfate) (Sulfuric acid)

GOROSHCHENKO, Ya.G.; BELOKOSKOV, V.I.; FOMIN, Yu.A.; MOTOV, D.L.

Selecting the industrial layout for the production of titanium pigments from perovskite concentrate with a side recovery of rare metals. Sbor.trudov po khim.tekhnol.min.syr'ia Kol'. poluos. no.1:148-221 '59. (MIRA 12:5)
(Titanium) (Rare earth metals)

Fomin, Yu. A.

33095
S/638/61/001/000/018/056
B104/B138

24.6700
AUTHORS: Gerasimov, A. G., Gorbunov, A. N., Dubrovina, V. A., Kaipov, D., Kuvatov, K., Orlova, A. I., Osipova, V. A., Sakovich, V. A., Silayeva, V. S., Fomin, Yu. A., Cherenkov, P. A.

TITLE: Study of photodisintegration of nitrogen, oxygen, and neon

SOURCE: Tashkentskaya konferentsiya po mirnomy ispol'zovaniyu atomnoy energii. Tashkent, 1959. Trudy. v. 1. Tashkent, 1961, 134 - 153

TEXT: The photodisintegration of N_7^{14}, O_8^{16}, and N_{10}^{20} was studied by means of a Wilson chamber in a magnetic field acting directly on the bremsstrahlung beam. In order to be able to distinguish reactions (γ,p) and (γ,pn), and record the recoil nuclei, the Wilson chamber was filled with a mixture consisting of the gas to be investigated (nitrogen or neon) and hydrogen. Reduced pressure was used in experiments with oxygen. In experiments with nitrogen, oxygen, and neon, the stopping power for protons was 0.65, 0.31, and 0.50 relative to air. The mean energy of the photo-

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B104/B138

Study of photodisintegration ...

protons from $\int pn$ reactions was lower than that from $\int p$ reactions. The effective cross sections were calculated; their shape indicates the importance of transitions in the residual nuclei. The proton angular distribution from $\int pn$ reactions is nearly isotropic for low proton energies. For high proton energies (>20 Mev), it is very similar to that in deuterm photodisintegration. The proton angular distribution from $\int p$ reactions is approximately isotropic for N_7^{14} and O_8^{16} at low energies. In the expression $d\sigma/d\Omega \sim A(1+B/A\sin^2\Theta+C/A\sin^2\Theta\cos\Theta+D/A\cos\Theta)$, the effect of the last three terms in parentheses increases for higher energies. The isotropic part of the angular distribution is greater for N_{10}^{20} than for the two other isotopes. An abnormally high yield of the $\int pn$ reaction was found for N_7^{14}; it is attributed to interaction of a photon with a pair of "valency" nucleons in the outer shell, which are in the $1p_{1/2}$ state with parallel spins. During photon absorption, the electric dipole absorption plays an essential part in N and O nuclei. The logarithmic moments of the photon-absorption cross sections are in good agreement with results obtained on the basis of an independent-particle model. Yu. K. Khokhlov

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S/638/61/001/000/018/056
B104/B138

Study of photodisintegration ...

(DAN, SSSR, 1954, 97, 239; ZhETF, 1957, 32, 124) and A. B. Migdal (ZhETF, 1945, 15, 81) are mentioned. There are 9 figures, 7 tables, and 22 references: 8 Soviet and 14 non-Soviet. The four most recent references to English-language publications read as follows: Livesey D. L. Canad. Journ. Phys., 35, 9, 1957; Rhodes, Stephens W. E. Phys. Rev., 110, 1415, 1958; Elliot, Flowers B. H. Proc. Roy. Soc., A. 242, 57, 1957; Svantesson N. L. Nucl. Phys., 3, 273, 1957.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva AN SSSR (Physics Institute imeni P. N. Lebedev AS USSR)

Card 3/4

X

ATRASHKEVICH, V.B.; FOMIN, Yu.A.; KHRISTIANSEN, G.B.

Calculation of fluctuations in the development of extensive air showers using the Monte-Carlo method. Izv. AN SSSR. Ser. fiz. 29 no.9:1696-1701 S '65. (MIRA 18:9)

VERNOV, S.N.; KHRISTIANSEN, G.B.; ABROSIMOV, A.T.; ATRASHKEVICH, V.B., BELYAYEVA, I.F.; VEDENEYEV, O.V.; KULIKOV, G.V.; FOMIN, Yu.A.; NECHIN, Yu.A.; SOLOV'YEVA, V.I.; KHRENOV, B.A.

Fluctuations in the development of extensive air showers with a fixed total number of charged particles and a fixed total number of muons. Izv. AN SSSR. Ser. fiz. 29 no.9:1676-1681 S '65. (MIRA 18:9)

L 4480-66 EWT(1)/EWT(m)/FCC/T/EWA(h) IJP(c) GW

ACC NR: AP5024637 SOURCE CODE: UR/0048/65/029/009/1696/1701

AUTHOR: Atrashkevich, V.B.; Fomin, Yu. A.; Khristiansen, G.B.

ORG: none

TITLE: Monte Carlo calculations on the fluctuations in the development of extensive air showers /Report, All-Union Conference on Cosmic Ray Physics held at Apatity 24-31 August 1964/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no. 9, 1965, 1696-1701

TOPIC TAGS: primary cosmic ray, secondary cosmic ray, extensive air shower, nucleon interaction, inelastic interaction, pion

ABSTRACT: The authors have employed Monte Carlo methods to calculate the fluctuations in extensive air showers, initiated by protons with fixed energy, of the total number of electrons, the total number of high energy muons, the age parameter, and the total energy flux in the electron-photon and nuclear-active components. Four different models were employed to describe the elementary high energy nucleon interaction; these models were selected to give an average inelasticity of 0.5 and differed in regard to the frequency and nature of very high energy secondaries. Very high energy pions were assumed to have an interaction free path in air of 80 g/cm^2, to interact with an inelasticity of unity and a multiplicity proportional to the fourth root of the energy, and to produce secondaries of which all have the same energy. Monte Carlo methods were

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ACC NR: AP5024637

employed to determine the inelasticities and locations of all the interactions of the primary proton and the locations of the interactions of the high energy secondary pions; the further development of the shower was calculated with conventional cascade equations in which the effect of pion decay was included but which are not further specified. Calculations were performed for showers initiated by 10^{15}, 10^{16}, and 10^{17} eV protons. The average values and dispersions of the number of electrons, the number of high energy muons, the age parameter, and the energy flux, and the correlation coefficient of the age parameter with the number of electrons are tabulated and some of the distributions are presented graphically. These averages, dispersions, and correlation coefficients did not vary greatly with the model selected to represent the elementary nucleon interaction event. Formulas are given for calculating the corresponding quantities for showers initiated by nuclei on the assumption that the shower initiated by a nucleus of mass number A and energy E is the sum of A showers, each initiated by a nucleon of energy A/E. The transformations required for comparing the present calculations with the experimental results of S.N.Vernov et al. (Izv. AN SSSR Ser fiz., 29, 1676, 1965 /see Abstract AP5024632/) are discussed but the comparison is not made. Orig. art. has: 5 formulas, 2 figures, and 3 tables.

SUB CODE: NP, SUBM DATE: 00/ ORIG REF: 006/ OTH REF: 000

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VERNOV, S.N.; KHRISTIANSEN, G.B.; ABROSIMOV, A.T.; ALRALHERZICH, V.B.; BELYAYEVA, I.F.; KULIKOV, G.V.; SOLOV'YEVA, V.I.; FOMIN, Yu.A.; KHRENOV, B.A.

Ultrahigh-energy primary cosmic radiation according to data on extensive air showers. Izv. AN SSSR.Ser.fiz. 29 no.10:1876-1880 O '65. (MIRA 18:10)

1. Nauchno-issledovatel'skiy institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta im. M.V.Lomonosova.

L 25772-66 EWT(m)/FCC/T IJP(c)

ACC NR: AP6016380 SOURCE CODE: UR/0048/65/029/010/1876/1880

AUTHOR: Vernov, S. N.; Khristiansen, G. B.; Abrosimov, A. T.; Atrashkevich, V. B.; Bolyayeva, I. F.; Kulikov, G. V.; Solov'yeva, V. I.; Fomin, Yu. A.; Khrenov, B. A.

ORG: Scientific Research Institute of Nuclear Physics, Moscow State University im. M. V. Lomonosov (Nauchno-issledovatel'skiy institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta)

40
B

TITLE: Primary superhigh-energy cosmic radiation according to data on extensive atmospheric showers

19

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no. 10, 1965, 1876-1880

TOPIC TAGS: cosmic radiation, muon

ABSTRACT: Of interest in the investigation of the primary energy spectrum of cosmic rays and their composition is the knowledge of the spectrum of extensive atmospheric showers (e.a.s.) with respect to the total number N_μ of high energy muons ($E_\mu \geq 10^{10}$ eV) and the distribution of e.a.s. over the total number of the particles N_e for a given N_μ. In this connection the authors analyze the primary energy spectrum of cosmic rays on the basis of experimental data obtained with a special device for investigating e.a.s. recorded with a probability of $W \geq 0.95$. This device makes it possible to determine the total number of charged particles in an e.a.s.

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ACC NR: AP6016380

at the observation level. An averaged function $\rho_\mu(R)$ is plotted to determine the spatial distribution N_μ of the muons, and, thus, the total number of these muons is determined. The distribution of N_e for a given N_μ is evaluated on the basis of data on an e.a.s. with $N_\mu = (1\text{-}2)\cdot 10^4$. The experimental findings are found to be in satisfactory agreement with theory. Thus, on the basis of the complex whole of the experimental findings, it may be concluded that the composition of primary cosmic rays in the superhigh-energy region apparently does not significantly differ from the composition in the low-energy region, and the γ-index of the primary energy spectrum is variable rather than constant. Orig. art. has: 5 figures. [JPRS]

SUB CODE: 20, 04 / SUBM DATE: none / ORIG REF: 009 / OTH REF: 002

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L 4528-66 EWT(m)/FCC/T IJP(c)

ACC NR: AP5024632 SOURCE CODE: UR/0048/65/029/009/1676/1681

AUTHOR: Vernov, S.N.; Khristiansen, G.B.; Abrosimov, A.T.; Atrashkevich, V.D.; Belyayeva, I.F.; Vedeneyev, O.V.; Kulikov, G.V.; Fomin, Yu. A.; Nechin, Yu. A.; Solov'yeva, V.I.; Khrenov, B.A.

ORG: none

TITLE: Investigations of fluctuations in the development of extensive air showers with a fixed total number of charged particles and a fixed total number of muons /Report, All-Union Conference on Cosmic Ray Physics held at Apatity 24-31 August 1964/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 29, no. 9, 1965, 1676-1681

TOPIC TAGS: cosmic ray shower, muon, charged particle, extensive air shower, particle distributic particle distribution

ABSTRACT: The authors have employed the modernized installation at Moscow State University, described elsewhere (S.N.Vernov et al., Izv. AN SSSR Ser. fiz., 28, 2087, 1964), to investigate the simultaneous distribution of total number N of charged particles, total number M of muons, and age parameter S in extensive air showers. Showers were selected for which the zenith angle of the axis was less than 30°. M was determined from the number of muons recorded by the muon detector and the perpendicular distance of the muon detector from the shower axis with the aid of the known lateral distribution of muons. The relative error in determining M did not exceed 35 %. The

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L 45288-66

ACC NR: AP5024632

error in determining S was estimated to be 0.02 by processing "artificial" showers of known age, calculated by Monte Carlo methods. The data presented were derived from some 300 showers with total numbers of charged particles ranging from 10^5 to 4 x 10^6. Histograms are given showing the distribution of showers with respect to N with fixed M, with respect to M with fixed N, with respect to S with fixed N, and with respect to S with fixed M, and scatter plots are given for N versus S with fixed M and for M versus S with fixed N. The correlation coefficient of S with M for fixed N ranged between 0.62 and 0.72; the correlation coefficient of S with N for fixed M was - 0.67. Orig. art. has: 10 formulas, 4 figures, and 1 table.

SUB CODE: NP/ SUBM DATE: 00/ ORIG REF: 006/ OTH REF: 001

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6

ACC NR: AT7007081 SOURCE CODE: UR/0048/66/030/010/1685/1689

AUTHOR: Vernov, S. N.; Khristiansen, G. B.; Abrosimov, A. T.; Atrashkevich, V. B.; Belyayeva, I. F.; Vedeneyev, O. V.; Kulikov, G. B.; Nechin, Yu. A.; Solov'yeva, V. I.; Fomin, Yu. A.; Khrenov, B. A.

ORG: none

TITLE: Phenomenological characteristics of broad atmospheric showers with a fixed number of μ-mesons and electrons /Paper presented at the All-Union Conference on Cosmic Radiation Physics, Moscow, 15-20 Nov 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 10, 1966, 1685-1689

TOPIC TAGS: mu meson, cosmic radiation

SUB CODE: 20

ABSTRACT: In an earlier work by Vernov et al (Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, 29, 1676, 1965), results obtained in a study at an installation of Moscow State University on broad atmospheric showers with zenith angles of 0-30° were reported. These results included the distribution of showers with a fixed number of electrons N_e with respect to the number of high-energy mesons N_μ and the age parameter S, distribution of showers with a fixed N_μ with respect to N_e and S, and the coefficients of the correlation between S and the fluxes of electrons and μ-mesons. In the work reported in this instance, the same relations were determined for broad atmospheric showers with zenith angles of 30-43°. The fluctuations of N_μ, S, and N_e, observed for an effective atmospheric depth of 1240 g/cm^2, were the same as those for vertical showers established in the earlier work. To determine the differences due to an increase in

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ACC NR: AP7007081

the effective atmospheric depth of 200 g/cm^2, calculations must be carried out with greater statistical precision. When results of the theoretical calculations on characteristics of broad atmospheric showers at 1240 g/cm^2 become available, the experimental data reported will be useful for the determination of the composition of primary cosmic radiation in the superhigh-energy range. Orig. art. has: 5 figures, 2 formulas and 1 table. [JPRS: 39,658]

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ALESHKOV, M.N., st. nauchn. sotr., kand. tekhn. nauk, inzh.-polkovnik; ZHUKOV, I.I., prof., doktor tekhn. nauk, general-mayor; KATKHANOV, M.N., doktor tekhn. nauk, dots., inzh.-polkovnik; VYSKUBOV, B.R., inzh.-polkovnik; KUKUSHKIN, D.D., kand. tekhn. nauk, polkovnik; MARKOV, O.P., dots., kand. tekhn. nauk, inzh.-podpolkovnik; SAVIN, N.V., inzh.-polkovnik; SMIRNOV, A.D., inzh.-podpolkovnik; FOMIN, Yu.G., kand. tekhn. nauk, inzh.-polkovnik; KISELEV, S.P., inzh.-polkovnik, red.

[Physical principles of rocket weapons] Fizicheskie osnovy raketnogo oruzhiia. Moskva, Voenizdat, 1965. 463 p. (MIRA 18:7)

L 3835-66 ARO/EWT(d)/FBD/FBO/EWT(m)/EWP(w)/EPF(c)/FA/EWP(c)/EWP(v)/T-2/EWP(k)/
LWP(h)/FCS(k)/EWA(h)/ETC(m) WH/EM/WE

AM5025577 BOOK EXPLOITATION

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AA9 BT1

Aleshkov, M. N. (Candidate of Technical Sciences, Engineer-Colonel); Vyakubov, B. R. (Engineer-Colonel); Zhukov, I. I. (Professor, Doctor of Technical Sciences, General Major of the I.T.S.); Katkhanov, M. N. (Doctor of Technical Sciences, Docent Engineer-Colonel); Kukushkin, D. D. (Candidate of Technical Sciences, Colonel); Markov, O. P. (Docent, Candidate of Technical Sciences, Engineer-Lieutenant Colonel); Savin, N. V. (Engineer-Colonel); Sarmov, A. D. (Engineer-Colonel); Fomin, YU. G. (Candidate of Technical Sciences, Engineer-Colonel)

Physical principles of rocket weapons. (Fizicheskiye osnovy raketnogo oruzhiya) Moscow, Voyenizdat M-va oborony SSSR, 1965. 463 p. illus., biblio. 12,000 copies printed.

TOPIC TAGS: rocket, rocket flight, weapon, projected ammunition, jet engine, rocket propellant, combustion chamber, engine fuel system, rocket guidance, missile ground equipment, rocket engine test, jet propulsion

PURPOSE AND COVERAGE: The book presents the principles of the theory of flight, the physical principles of jet propulsion, describes rocket engines and fuels,

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and control and guidance systems of various types. It also describes the working principle of rockets of various types and their basic equipment, and the designs of ground equipment and the tests of rocket complexes. It also contains a classification of rocket equipment. The book is intended for officers connected with the manufacture of rocket equipment, and for students of military educational institutions. The contents of the book is based on materials of overt Soviet and foreign publications.

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Ch. IX. Ground equipment of various purpose rocket complexes — 385
Ch. X. Rocket and rocket complex tests — 407
Ch. XI. Rocket combat units — 427

Bibliography — 459

SUB CODE: GM, MA SUBMITTED: 30Mar65

NO REF SOV: 055 OTHER: 042

Card 3/3

FOMIN, Yu.I.

Progress of railroad transportation in China. Zhel.dor.transp. 42 no.6:81-83 Je '60. (MIRA 13:7)
(China--Railroads)

L 16471-66 EWT(m)/ETC(f)/EPF(n)-2/EWG(m)/EWP(j) WW/DM/RM
ACC NR: AP6005532 (A) SOURCE CODE: UR/0089/66/020/001/0053/0054

AUTHOR: Fokin, A. V.; Kuzicheva, V. S.; Fomin, Yu. K. 43 40

ORG: none 8

TITLE: Possibilities of "oil" flotation for reprocessing liquid radioactive wastes

SOURCE: Atomnaya energiya, v. 20, no. 1, 1966, 53-54 19,55

TOPIC TAGS: flotation, radioactive waste disposal, radioisotope, nuclear engineering, solvent extraction

ABSTRACT: "Oil" flotation may be used at ordinary temperatures with comparatively simple equipment for extracting the solid phase from waste radioactive pulp and concentrating it together with trapped radioisotopes in a layer of organic matter which is immiscible with water. The suspended particles are treated with various water-repellent surface-active sorbents, (e. g. salts of fatty acids). Up to 90--95% of the radioactive isotopes may be removed from the water in a single stage. It is recommended that nonflammable and low-boiling solvents of the carbon tetrachloride type should be used in quantities of 30-50 ml per gram of solid residue to

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be extracted. In some cases organic monomers may be used for the "oil", and the layer of extracted material may be directly converted to a solid plastic by bulk or suspension polymerization. It was found that preparations based on polystyrene and various polyester acids may be used for burial of the radioactive isotopes.

SUB CODE: 18/ SUBM DATE: 15Oct65/ ORIG REF: 000/ OTH REF: 000

Card 2/2 mc

RAKCHEYEV, A.D.; FOMIN, Yu.M.; BURIKOV, Ye.V.; GUBANOV, A.M.

New data on the age of pyrite mineralization of ore deposits in central Urals. Sov.geol. 1 no.7:148-150 Jl '58. (MIRA 11:11)

1. Moskovskiy gosudarstvennyy universitet im M.V. Lomonosova.
(Ural Mountains--Pyrites)

FOMIN, Yu.M.

Find of archaeocyathidlike organisms in Middle Devonian sediments on the eastern slope of the Southern Urals. Paleont. zhur. no.2:17-19 '63. (MIRA 16:8)

1. Moskovskiy gosudarstvennyy universitet.
(Ural Mountains—Archaeocyathidae)

TAL'SKAYA, Ol'ga Semenovna; MEVEROV, L.P., red.; FOMIN, Yu.S., otv.za vypusk

[Streets in Sverdlovsk are named for them] Ikh imenami nazvany ulitsy Sverdlovska. Sverdlovsk, Sverdlovskii obl.kraevedcheskii muzei, 1959. 71 p. (MIRA 14:2)
(Sverdlovsk--Streets)

MYALO, I.I., starshiy nauchnyy sotrudnik; FOMIN, Yu.V., starshiy veterinarnyy vrach

The ANZh-2 truck-mounted liquid manure spreader for the control of bloodsucking insects. Veterinariia 39 no.6:76-77 Je '62 (MIRA 18:1)

1. Dal'nevostochnyy nauchno-issledovatel'skiy veterinarnyy institut (for Myalo). 2. Volkovskiy myaso-molochnyy sovkhoz Amurskoy oblasti (for Fomin).

FOMIN, Yu.V., nauchnyy sotrudnik

Using gamma globulin for the prophylaxis of infectious atrophic rhinitis in swine. Veterinariia 40 no.8:41 Ag '63. (MIRA 17:10)

1. Dal'nevostochnyy nauchno-issledovatel'skiy veterinarnyy institut.

BAZYLEV, P.M., doktor veter. nauk; FOMIN, Yu.V., aspirant

Diagnosis of Aujeszky's disease by the method of diffuse precipitation reaction in agar gel. Veterinariia 42 no.7:16-19 Jl '65.
(MIRA 18:9)

1. Gosudarstvennyy nauchno-kontrol'nyy institut veterinarnykh preparatov.

L 21698-66 EWT(1)/T JK

ACC NR: AP6015819 (A, N) SOURCE CODE: UR/0346/65/000/007/0016/0019

AUTHOR: Bazylev, P. M. (Doctor of veterinary sciences); Fomin, Yu. V. (Aspirant) 30 B

ORG: State Scientific Control Institute of Veterinary Preparations (Gosudarstvennyy nauchno-kontrol'nyy institut veterinarnykh preparatov)

TITLE: Diagnosis of Aujeszky's disease by the method of diffusion precipitation reaction in agar gel

SOURCE: Veterinariya, no. 7, 1965, 16-19

TOPIC TAGS: serum, antigen, commercial animal, animal disease, virus disease

ABSTRACT: The authors present the results of an experimental investigation of the diffusion precipitation test (DPT) on an agar plate as a means of laboratory diagnosis of Aujeszky's disease in livestock. The organization of this test requires the following components: agar plates (with 1.5% agar), precipitating serum, virus-retaining antigens (extracts from parenchymatous organs, prepared from pancreatic tissue, lymphatic nodes, spleen, lung, and brain of sick piglets, hogs, sheep, and rabbits). The precipitating serum used was liquid 10% anti-Aujesky's disease globulin as well as dry globulin obtained from the 10% globulin by the lyophilic drying method. The agar (25cc) is dissolved in Petri dishes, whereupon droplets of dissolved agar are poured onto the bottom of the holes punched in agar plates, with portions of antigens then poured into these holes (and with the precipitating serum poured into the central hole). This is a fairly simple yet effective test which does not require intricate laboratory equipment. Furthermore, it was established that

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ACC NR: AP6015819

extracts of lymph nodes or of the pancreas in a chloroform-treated saline solution are the most effective antigens for the DPT. These preliminary experiments indicate that the DPT employing agar gel is a specific and promising method of the laboratory diagnosis of Aujeszky's disease. Before final approval can be given, however, broader tests of DPT on hog farms are advisable and, in addition, a greater amount of data on the lack of nonspecific reactions in the presence of other hog diseases of viral and bacterial etiology (swine fever, pneumonia, erysipelas, septicemia, paratyphoid) is needed. Orig. art. has: 2 figures. [JPRS]

SUB CODE: 06, 02 / SUBM DATE: none / ORIG REF: 004 / OTH REF: 003

Card 2/2 FW

ACC NR: AP7001400 SOURCE CODE: UR/0413/66/000/021/0076/0076

INVENTOR: Smirnov, V. V.; Fomin, Yu. V.; Sud'in, A. P.; Merzenev, M. D.

ORG: none

TITLE: Arc welding attachment. Class 21, No. 187905

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 21, 1966, 76

TOPIC TAGS: arc welding, arc length, automatic arc length control, welding equipment

ABSTRACT: This Author Certificate introduces an attachment for arc welding which includes a welding head and a copying device. To ensure a stable arc length and to improve the welding quality, the welding head carries an additional argon nozzle and is connected to a membrane actuator. The argon jet from the additional nozzle

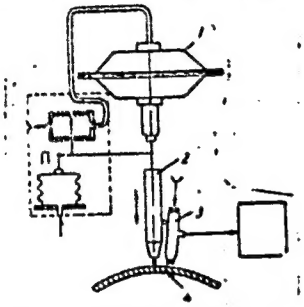

Fig. 1. Welding attachment

1 - Membrane actuator; 2 - welding torch; 3 - nozzle; 4 - argon jet.

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ACC NR: AP7001400

serves as the copying device. The change of jet pressure caused by the change in the arc length activates the membrane actuator and controls the arc length (see Fig. 1). Orig. art. has: 1 figure.

SUB CODE: 13 / SUBM DATE: 02Apr65/ ATD PRESS: 5111

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